

CALIFORNIA

OCCUPATIONAL GUIDES

COMPUTER SUPPORT SPECIALISTS

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INTEREST AREA
INVESTIGATIVE



WHAT DOES A COMPUTER SUPPORT SPECIALIST DO?

Computers are a part of everyday life, used at home, work, and school. Almost every computer user encounters a problem occasionally, whether it is the dreaded crash of a hard drive or just the annoyance of a forgotten password. The explosion of computer use has created a high demand for COMPUTER SUPPORT SPECIALISTS to provide advice to users.

Computer Support Specialists provide technical assistance to computer system users. These troubleshooters help clients use computer hardware and software, including printing, installation, word processing, e-mail, and operating

systems. They answer phone calls, use automated diagnostic programs to analyze problems, and resolve recurrent difficulties. They also may write training manuals.

Computer Support Specialists are also called Technical Support Specialists and Help-Desk Technicians. The job titles Help Desk and Customer or Tech-Support are often used interchangeably. Most often, Customer Tech-Support refers to those who troubleshoot for the customers of a company, while Help Desk refers to those supporting their co-workers.

Computer Support Specialists perform the following tasks:

- Answer users' inquiries regarding computer software and hardware operation to resolve problems.
- Maintain record of daily communication transactions, problems, and remedial action taken, and any installation activities.
- Plan and put into action long-range solutions with minimum user disruption.
- Install and perform minor repairs to hardware, software, and peripheral equipment, following design or installation specifications.
- Document clear and accurate resolutions to hardware and software problems.
- Access the system to observe its functions in order to verify correct operations and detect errors.
- Listen to and ask appropriate, clear questions to gather needed information.
- Organize, summarize, and analyze users' statement of problems.
- Walk users through problem-solving steps in person, by telephone, or computer.
- Educate users to resolve future problems themselves.

- Manage demands from multiple users in order to serve them in a timely manner.
- Follow data security procedures in solving customers' problems.
- Develop working relationships with customers.
- Solicit customer feedback and use the information to improve quality of service.
- Refer major hardware or software problems or defective products to vendors or technicians for service.
- Tailor and present training to customers on the proper use of software and hardware.
- May install and configure hardware and software.
- In some firms, install and set up personal computers (PCs) and peripheral equipment (cables, keyboard, etc.) and install the software.

WHAT SKILLS ARE IMPORTANT?

Important skills, knowledge, and abilities for Computer Support Specialists include:

- Instructing – Teaching others how to do something.
- Operations Analysis – Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- Troubleshooting – Determining what is causing an operating error and deciding what to do about it.
- Computers and Electronics – Knowledge of electric circuit boards, processors, chips, and computer hardware and software, including applications and programming.
- Oral Comprehension – The ability to listen to and understand information and ideas presented through spoken words and sentences.
- Oral Expression – The ability to communicate information and ideas in speaking so others will understand.
- Quality Control Analysis – Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- Reading Comprehension – Understanding written sentences and paragraphs in work-related documents.
- Written Expression – The ability to communicate information and ideas in writing so others will understand.
- Critical Thinking – Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Judgment and Decision Making – Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Equipment Selection – Determining the kind of tools and equipment needed to do a job.
- Operation Monitoring – Watching gauges, dials, or other indicators to make sure a machine is working properly.
- Complex Problem Solving – Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Computer Support Specialists should have the ability to remain calm and focused while dealing with people who may be highly stressed. They also need to understand the big picture - not just the slice of information given to customers. Wide-based technical knowledge and a self-assured manner help them put frustrated customers at ease. Additionally, they need to be excellent time managers to deal with multiple customer requests in a timely way.

WHAT'S THE WORK ENVIRONMENT?

Computer Support Specialists may work either within a company that uses computer systems or directly for a computer hardware or software vendor. Increasingly, Specialists work for help-desk or support services firms, where they provide computer support on a contract basis to clients. They spend most of their time responding to incoming calls, often dealing with several calls simultaneously. This multi-tasking can be stressful. Additionally, technical jargon may confuse customers who already may be frustrated or angry when they call for help; the Specialist may need to deal with customer frustration or diffuse their anger before moving on to problem solving.

Some jobs require physical strength to lift hardware such as PCs and monitors and the agility



to install cables and peripheral hardware, often in tight spaces.

Like other workers who type on a keyboard for long periods, Computer Support Specialists are susceptible to eyestrain, back discomfort, and hand and wrist problems such as carpal tunnel syndrome. Job burnout at help desks is also common.

Union Membership

Union membership is not common in this occupation; Support Specialists and Help-Desk Technicians who work for government agencies may belong to public agency unions.

WHAT'S THE CALIFORNIA JOB OUTLOOK?

The following information is from the occupational projections produced by the Employment Development Department (EDD) Labor Market Information Division (LMID):

Computer Support Specialists

Estimated number of workers in 2002:	57,600
Estimated number of workers in 2012:	73,400
Projected Growth 2002-2012:	27.4%
Est. openings due to separations by 2012:	7,100

These figures do not include self-employment.

Computer Support Specialist is listed among the top five occupations with the greatest growth in California. Total job openings expected between 2002 and 2012, including replacement positions, amount to over 22,900.

The estimated number of job opportunities for this large occupational group is expected to total 2,290 annually from 2002 through 2012.

Trends

Employers of Computer Support Specialists range from start-up companies to established industry leaders. Industries not typically associated with computers (such as construction) increasingly need computer-related workers because of the continued development of Internet, electronic commerce, telecommunications, and e-mail applications. The falling prices of computer hardware and software should help businesses expand their computing applications and integrate

new technology into their operations. Demand will continue to grow for Computer Support Specialists who are knowledgeable about the latest technologies and are able to apply them to the needs of the organization.

The rapid pace of improved technology will accelerate the demand for Computer Support Specialists. As computers and software become more complex, these Specialists will be needed to provide technical assistance to customers and other users. Consulting opportunities for these workers also should continue to grow as businesses increasingly need help managing, upgrading, and customizing more complex computer systems.

Job prospects should be best for college graduates who are up to date with the latest skills and technologies and also have practical work experience to go along with their formal training. Employers will continue to seek Computer Support Specialists who possess a strong background in fundamental computer skills combined with good interpersonal and communication skills. Due to the rapid growth in demand, workers with strong computer skills that do not have a bachelor's degree should continue to qualify for some entry-level positions. However, certifications and practical experience may soon be essential for persons without degrees.

WHAT DOES THE JOB PAY?

California Earnings

The following information is from the Occupational Employment Statistics Survey of Employers by EDD/LMID:

Computer Support Specialists 2005 Wages

Hourly wages range from	\$16.80	to	\$28.50
Average hourly wage	\$23.74		
Average annual wage	\$49,369		

These figures do not include self-employment.

Hours

Computer Support Specialists usually work 40 hours a week, but that may include evening or weekend work if the employer requires computer support during evenings and weekends. Overtime may be necessary when unexpected technical

problems arise. Those who work as consultants are away from their offices much of the time, sometimes spending months working in a client's office.

Benefits

Benefits usually include vacation, sick leave, retirement, and medical, dental, and vision care.

HOW DO I PREPARE FOR THE JOB?

Education and Training

There are many ways to become a Computer Support Specialist, due in part to the wide range of skills workers need. There are still companies that don't require specific skill sets, certificates or degrees at this level just a passion for computers and the ability to quickly pick up new skills.

Although there is no universally accepted way to prepare for the occupation, many employers prefer to hire applicants who have some college background, computer training, and knowledge of software. A bachelor's degree in computer science or information systems is required for some jobs.

Many companies are flexible about requiring a bachelor's degree for support positions because of the explosive demand for Specialists. However, applicants without a four-year degree may need an associate degree in computer information science and practical work experience to show they have the necessary skills.

Computer Information Science certificate programs, offered by many community colleges, private schools, and software and hardware product vendors, will help applicants qualify for entry-level positions.

Licensing and Certification

Licensing is not required for this occupation. Certification is optional, but can enhance career development and advancement.

Continuing Education

As technology continues to improve, Computer Support Specialists need to keep their skills

current and acquire new ones. Many colleges and universities, private schools, associations, employers, and hardware and software vendors offer pertinent training.

HOW DO I FIND THE JOB?

Direct application to employers remains one of the most effective job search methods. Many Specialists work in the computer manufacturing and software developing industry and the computer and data processing service industry. However, since they work in almost all industries, you can focus your search, start by checking private firms listed under these yellow pages headings:

Search these **yellow page** headings for listings of private firms:

- Computer Dealers
- Computer Networks
- Computer Software and Publishers & Developers
- Data Processing Service

Those who want to work in State service should visit the Web page of the California State Personnel Board, www.spb.ca.gov for information about the Assistant Information Systems Analyst classification.

The following Internet resources can be helpful to the job search process:

America's Career InfoNet
www.acinet.org

America's Job Bank
www.ajb.dni.us

CalJOBSSM
www.caljobs.ca.gov

Job Search and Resume Writing
www.worksmart.ca.gov/success_tips_menu.html

Local Job Service Offices
www.edd.ca.gov/jsrep/jsloc.htm

Occupational Information Network (O*NET) Online
<http://online.onetcenter.org>

One-Stop Career Centers List

www.edd.ca.gov/ONE-STOP/pic.htm

For statewide and local projections, wages, employers by county, and other occupational information go to www.labormarketinfo.edd.ca.gov and select *Find an Occupation Profile*.

WHERE CAN THE JOB LEAD?

An entry-level job as a Computer Support Specialist or Help-Desk Technician is an excellent way to begin a career in the computer-based information technology field.

Beginning Computer Support Specialists start out dealing directly with customers or in-house users. Then they may advance into more responsible positions and use what they learned from customer input to improve the design and efficiency of future products. Large companies usually have a formal training program for employees that continues beyond their initial training to keep them moving up the career ladder. Advancement opportunities include software developers, computer engineers, systems analysts, systems managers, and database administrators. Promotions may depend on performance rather than formal education.

Within State service, computer support workers start as Assistant Information Systems Analyst. They can advance to Associate Information Systems Analyst (Specialists), and Associate Information Systems Analyst (Supervisors).

Computer Support Specialists at hardware and software companies often enjoy fast-track upward mobility; advancement sometimes comes within months of initial employment.

OTHER SOURCES OF INFORMATION

Association of Computer Support Specialists,
218 Huntington Road
Bridgeport, CT 06608
(203) 332-1524
www.acss.org

Association of Support Professionals
66 Mt. Auburn Street
Watertown, MA 02472
(617) 924-3944 x11
www.asponline.com

Help Desk Institute

102 S. Tejon, Suite 1200
Colorado Springs, CO 80903
(800) 248-5667
www.thinkhdi.com

Orange County Chapter

www.ochdi.com

Sacramento Chapter

www.thinkhdi.com/chapters/sacramento

San Diego Chapter

www.sandiegohelpdesk.com

San Francisco Bay Area Chapter

www.sfhdi.org

Silicon Valley Chapter

www.thinkhdi.com/membership/localchapters

CA Division of Apprenticeship Standards

For the closest district office, visit
www.dir.ca.gov/DAS/das.html

RELATED OCCUPATIONAL GUIDES

Computer Programmers	No. 81
Electronic Data Processing (EDP) Managers	No. 348
Computer Systems Analysts	No. 541

OCCUPATIONAL CODE REFERENCES**SOC (Standard Occupational Classification)**

Computer Support Specialists 15-1041

O*NET (Occupational Information Network)

Computer Support Specialists 15-1041.00

OES (Occupational Employment Statistics)

Computer Support Specialists 25104